

## DESCRIPTION

## TRANSMISSION SECONDARY ELECTRON EMITTER AND ELECTRON

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TUBE  
-- This Application is a National Phase Application under 35 U.S.C. 371 claiming the benefit of  
PCT/JP03/01992 filed on 02/24/2003, which has priority based on Japan Application No. 2002-64165 filed 03/08/2002--  
Field of the Art

5           The present invention relates to a transmission  
secondary electron emitter emitting secondary electrons  
generated by primary electrons made incident, and an  
electron tube provided with the transmission secondary  
electron emitter.

## 10       Background Art

          Attention has been recently focused on a  
secondary electron emitter which is used for an  
electron tube and uses diamond. The reason for this is  
that the diamond has negative electron affinity, and  
15       the diamond has high secondary electron-emission  
efficiency. One example is reported in "Thin Solid  
Films 253(1994) p151." In the example, the diamond is  
used as a material for a reflection type secondary  
electron emitter of which the surface of emission for  
20       emitting secondary electrons is the same as the surface  
of incidence for making primary electrons incident  
thereon. That is, in the secondary electron emitter, a  
polycrystalline diamond thin film of which the surface  
is terminated with hydrogen is formed on a substrate  
25       made of Mo, Pd, Ti or AlN or the like, and the emission  
efficiency of the second electron is improved.

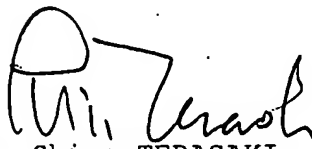
VERIFICATION

The undersigned, of the below address, hereby certifies that he/she well knows both the English and Japanese languages, and that the attached is an accurate English translation of the PCT application filed on February 24, 2003 under No. PCT/JP03/01992.

The undersigned declares further that all statements made herein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 27th day of August, 2004.

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